

Part IA PBS Tripos

PBS 1: Introduction to Psychology

2022/2023 Course Guide

Course Organiser

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Useful information

This course aims to introduce a variety of theoretical and methodological approaches to the study of psychology. Students from other Triposes take the PBS 1 Introduction to Psychology course and it is taught in such a way to allow any student who has never studied Psychology (or Biology) to follow the material.

The Department runs a [site on Moodle](#) to support all students taking this paper.

If you are not already enrolled in this site, please contact our librarian, Daniele Campello (library@psychol.cam.ac.uk) or the Teaching Office, teaching@psychol.cam.ac.uk

Teaching is via lectures, which will be held in-person. A recording of each lecture will be made available afterwards; lectures **will not** be live-streamed.

Students with disabilities and/or particular learning needs should discuss assessments with the Course Leader to ensure they are able to fully engage with all assessment within the course.

Brief description of the course

Across the course, a series of four broad topics will be explored: Individual Differences, Construction of Social Reality, Mind and Body and Decision Making. Within each topic, you will be introduced to specific research areas which contribute knowledge to those topics from different research perspectives. You will also see that psychology is a very broad science, full of debates, discrepancies and disagreements: at the end of each Topic, the contributing lecturers will hold a discussion of the Topic between themselves and welcome any contributions from you.

Educational Aims

The course has been designed to deliver these educational aims:

- Provide students with knowledge about the breadth of psychology, its range of research questions, research methods and theoretical perspectives.
- Provide students with the opportunity to gain some specialised knowledge of specific research areas in psychology.

- Provide students with the opportunity to understand how different research *approaches* in psychology relate to each other.
- Provide students with the opportunity to understand how to integrate material across different areas of psychology
- Provide students with the opportunity to recognise valid forms of argument which allow psychological research to progress

Student learning outcomes

Students should keep these educational aims in mind as they evaluate their progress in achieving the student learning outcomes. These are:

- Demonstrate conceptual knowledge of specific research areas in Psychology.
- Demonstrate knowledge of research approaches and techniques used in Psychology that are suitable for particular kinds of research question
- Demonstrate knowledge of the different perspectives within a Topic
- Demonstrate understanding of how different perspectives can be integrated
- Develop the ability to recognise what is and what is not an appropriate, objective and defensible conclusion about research outcomes
- Develop the ability to write cogent essays which demonstrate knowledge and understanding of the above.

Mode of Assessment

The course is assessed by means of a single examination, testing the student learning outcomes above. The examination will consist of a written paper requiring students to answer essay questions. Questions will be in two sections. Section A will ask questions drawn from specific lectures within a Topic and Section B will ask questions requiring candidates to integrate material across lectures in a Topic **and**, where relevant, across the entire course. Please note that there is no minimum or maximum total number of questions drawn from any of the four Topics on the Course. Students are therefore advised to prepare all Topics for the Examination.

Supervision Arrangements

For many students, arrangements for supervisions will already have been made by their Director of Studies. Where this is not the case, please contact your College DoS or Tutorial Office to make arrangements.

Typically, students receive about eight supervisions in total, although each College provides its own guidelines about number and frequency of supervisions for its students. Each supervisor for the paper is normally prepared to provide all the supervisions necessary.

Suggested essay titles for supervision are included in this Guide and sometimes on lecture handouts.

Course References and Reading Lists

Suggested reading can be found in the [online reading list](#)¹. Some lecturers will give more references in their lectures. **Please note that you are not expected to read everything on the lists, and certainly not before the start of lectures.** Instead, you may wish to sample one or two references in advance, but you should follow the advice of your supervisor concerning how much reading is suitable for achieving the learning objectives.

Reading lists are live and may be updated across the year, and will be completed by the start of each term.

Lecture Schedule

Michaelmas Term

<i>Topic</i>	<i>Lecture</i>	<i>Who</i>	<i>When</i>	<i>Where</i>
Introduction	Introducing the course	A.L. Milton	7 th October 2pm	Lecture Theatre A (SSC)
Individual Differences	Differential Psychology	L.H. de-Wit	10 th October 11am	Biffen Lecture Hall (Genetics)
	IQ 1	K.C. Plaisted-Grant	14 th October 2pm	Lecture Theatre A (SSC)
	IQ 2	K.C. Plaisted-Grant	17 th October 11am	Biffen Lecture Hall (Genetics)
	IQ 3	K.C. Plaisted-Grant	21 st October 2pm	Lecture Theatre A (SSC)
	Personality 1	J. Rentfrow	24 th October 11am	Biffen Lecture Hall (Genetics)
	Personality 2	J. Rentfrow	28 th October 2pm	Lecture Theatre A (SSC)
	Personality 3	J. Rentfrow	31 st October 11am	Biffen Lecture Hall (Genetics)
	Lecturers' Discussion of the Individual Differences Topic	J. Rentfrow, K.C. Plaisted-Grant	4 th November 2pm	Lecture Theatre A (SSC)
Constructing Social Reality	Perception of Faces 1	J. Mollon	7 th November 11am	Biffen Lecture Hall (Genetics)
	Perception of Faces 2	J. Mollon	11 th November 2pm	Lecture Theatre A (SSC)
	Social information processing in infancy 1	K. Plaisted-Grant	14 th November 11am	Biffen Lecture Hall (Genetics)
	Social information processing in infancy 2	K. Plaisted-Grant	18 th November 2pm	Lecture Theatre A (SSC)

¹ <https://cam.alma.exlibrisgroup.com/leganto/readinglist/lists?courseCode=PSY01>

	Self-Recognition 1	J. Garrison	21 st November 11am	Biffen Lecture Hall (Genetics)
	Self-Recognition 2	J. Garrison	25 th November 2pm	Lecture Theatre A (SSC)
	Lecturers' Discussion of the Constructing Social Reality Topic	J. Mollon, K. Plaisted-Grant J. Garrison	28 th November 11am	Biffen Lecture Hall (Genetics)

Lent Term

<i>Topic</i>	<i>Lecture</i>	<i>Who</i>	<i>When</i>	<i>Where</i>
Constructing Social Reality	Social information processing in infancy Q&A	K.C. Plaisted-Grant	19 th January 4pm	TBC
Mind and body	Emotion 1	S. Schnall	20 th January 2pm	TBC
	Emotion 2	S. Schnall	23 rd January 11am	TBC
	Emotion 3	S. Schnall	27 th January 2pm	TBC
	Mental Health 1	K.C. Plaisted-Grant	30 th January 11 am	TBC
	Mental Health 2	K.C. Plaisted-Grant	3 rd February 2pm	TBC
	Mental Health 3	K.C. Plaisted-Grant	6 th February 11 am	TBC
	Mental Health 4	K.C. Plaisted-Grant	10 th February 2pm	TBC
	Lecturers' Discussion of the Mind and Body Topic	S. Schnall, K.C. Plaisted-Grant	13 th February 11 am	TBC
Decision Making	Neuroscience of Decision Making 1	D. Talmi	17 th February 2pm	TBC
	Neuroscience of Decision Making 2	D. Talmi	20 th February 11am	TBC
	Political Decision-Making 1	L.H. de-Wit	24 th February 2pm	TBC
	Political Decision-Making 2	L.H. de-Wit	27 th February 11am	TBC
	Political Decision-Making 3	L.H. de-Wit	3 rd March 2pm	TBC
	Political Decision-Making 4	L.H. de-Wit	6 th March 11am	TBC
	Political Decision-Making 5	L.H. de-Wit	10 th March 2pm	TBC
	Lecturers' Discussion of the Decision Making Topic	D. Talmi, L.H. de-Wit	13 th March 11am	TBC

Topic 1 - Individual Differences

After an introduction session (7th Oct, 2pm, Professor Amy Milton), the course begins with the study of measurable differences between people. On the whole, studying individual differences has been regarded as a somewhat separate enterprise to experimental psychology, which attempts to control for individual differences in its pursuit of general laws of behaviour, mechanisms of the mind and (neuro)cognitive processes common to all. Instead, “differential psychology” has tended to focus on measurable differences between people, classically in traits such as personality and intelligence (or more accurately IQ).

The study of these areas has thrown up some fascinating findings and as you might imagine a wealth of data. One of the greatest challenges in the study of individual differences is how to make sense of these data². Any number of explanations seem possible so how can (or should) we constrain our hypotheses in any scientific study of differences between people? Can we rely simply on rigorous methodology, and if so, what methods would be best? And if not, what are the alternative means by which we can decide between this and that interpretation? (Keep these questions in mind as you attend the lectures, and perhaps discuss them in supervisions. You will find that this approach to the material will allow you to develop your skills as a psychologist).

This Topic will provide an introduction to differential psychology, followed by lectures on Personality and IQ. Each of these two research areas adopt psychometric and behavioural genetics approaches to the Topic.

Introducing the Course

Professor Amy L Milton

7th October

This session will introduce PBS1 and allow the opportunity for questions about the course to be addressed.

Individual Differences: Introduction

Dr Lee de-Wit

10th October

Outline

This lecture will introduce the distinction between experimental psychology (which is concerned with observing similar or group average effects across a group of participants) and differential psychology (which is concerned with exploring individual variation around the group average). Evidence will be presented suggesting that

² You may already have noticed that “data” is often used in the singular in conversation, by the media etc, even though it is the plural of “datum”. Perhaps this is because people use “data” as a shorthand for “data set”. Either way, because you will be using the term so frequently in your study of Psychology, it’s worth deciding now whether you will adopt the plural “data” or the singular “data set” in your writing (and we can all agree on using “datum” for a single point in a data set!).

whilst experimental methods can sometimes offer a straightforward means of causal relationships, individual differences also offer a rich source of data to test hypotheses about human psychology. Novel platforms for large scale, cross cultural, data collection (like computer games) also offer exciting potential for further integrating the measurement of individual differences into the scientific study of human behaviour.

Individual Differences: IQ and Intelligence Testing

Dr Kate Plaisted-Grant
14th, 17th, 21st October

Outline

The history testing of individual differences in intelligence or IQ is controversial and has thrown up some quite extreme views about the data. These lectures provide a short history of intelligence testing, the definition and measurement of IQ, principles of test construction and reliability and validity of IQ tests. We will also address the concept of the heritability of IQ and procedures for estimating heritability, twin studies and adoption studies. We will consider test bias and studies of group differences in intelligence, taking a critical look at the claims made about any differences and what possible reasons may have motivated researchers to conduct such studies.

Suggested supervision essay titles

- How would you design a new IQ test, and why?
- So-called “racial differences” on IQ tests should form no part of the endeavour to reveal the cognitive mechanisms underpinning mental ability. Discuss with evidence to support your argument.
- How far is it possible to argue that general intelligence (‘g’) is entirely determined by several cognitive processes?

Individual Differences: Personality

Professor Jason Rentfrow
24th, 28th, 31st October

Outline

Individual differences in personality are perhaps one of the most fascinating yet frustrating topics studied in psychology. Fascinating because of its richness and complexity, frustrating because there is little consensus about what personality is exactly. These lectures review some of the dominant theoretical perspectives about personality and the ways in which it is typically assessed.

Suggested supervision essay titles

- What are the limitations of current conceptualizations of personality and how serious are they?
- What are three mechanisms responsible for behavioural manifestations of personality? Give examples to illustrate how the mechanisms work.

Individual Differences - Discussion of the Topic

Professor Jason Rentfrow and Dr Kate Plaisted-Grant
4th November

Topic 2 - Constructing Social Reality

This topic tackles what seems at face value to be the simplest of psychological tasks – perceiving and understanding others’ intentions, desires and actions. However, we only need to consider how often misunderstandings (minor and major) occur during social interaction, misjudgements in predicting what people will do and misconceptions of others’ actions to realise that our concept of the social world is a construction from many inputs and influences. Nonetheless, there are data obtained through techniques from experimental psychology and neuroscience that are consistent with the view that there are some very simple and direct neurocognitive mechanisms for social perception.

It may be that evolution has furnished the immature brain with specialised innate mechanisms dedicated to social perception which serve to scaffold more complex constructions of the social world. The question of innate mechanisms for social perception has been explored in studies of face recognition using rigorous methods of experimental psychology. Another approach is to consider the development of social perception in early infancy. Both approaches have produced data which we can use to constrain our theories and hypotheses about the nature and origin of the processes and mechanisms underpinning the construction of social reality.

Underpinning any social perception mechanisms is the ability to make a distinction between myself and the others I am interacting with. Without the distinction between self and other, it seems implausible that any approximate model of the social world would even be possible. This makes it all the more surprising that errors of self-other attribution are quite common. The final two lectures will describe research on the neural mechanisms that may underlie the ability to know what information pertains to “self” and what to “other”.

Constructing Social Reality: Perception of faces

Professor John Mollon

7th, 11th November

Outline

Crucial to our social interaction is our ability to identify and remember faces; and crucial to our understanding of the emotional states of others is our ability to recognise facial expressions. Have special brain mechanisms evolved for these purposes? Are some people innately better at face recognition than others? The topic of face perception will be used to illustrate several of the techniques that are used by experimental psychologists to study perception in general.

Suggested supervision essay titles

- Do we have dedicated brain mechanisms for the recognition of faces?
- What is the evidence that individual differences in the ability to recognise faces are heritable?

- What is known of the processes underlying the recognition of faces? Are they different from those underlying the recognition of other objects?
- Illustrate the different experimental techniques that can be used to study the perception of faces.

Constructing Social Reality: Social Cognition

Dr Kate Plaisted-Grant

14th & 18th November

Outline

Social interaction seems like a simple business for most of us. But this is quite surprising when you consider the limited range of cues available at the time and the ambiguity of those cues: a frown of annoyance may seem perceptually identical to a frown of concern, a shout to “run” to a child on a football field may be tonally identical to a shout to a child to run from danger. Surely in these instances a good deal of learning is needed to be able quickly disambiguate messages by integrating specific learned contextual cues available with the social cues. However, strong claims have been made that many of our social cognition skills are innately given, and that even by the age of only four years, children show sophisticated skills in understanding complex social interactions. These two lectures will introduce the psychological processes that may underpin successful social interaction, explore possible neurological mechanisms associated with these processes and consider the developmental trajectory of social cognition processes from infancy to adolescence. Throughout this discussion, we will try to identify the limitations of competing theoretical accounts by using the available neuroscientific and behavioural data. Finally, we shall consider empirical attempts to establish the boundaries of our concepts of ‘self’ and ‘other’. Presumably to be fluent in social interactions, we must have a strong sense of what is generated by ourselves, what is generated by others and a sense of agency (own and others). This short discussion of self vs other will lead into two further lectures which explore neuroscientific studies of the basis of this distinction.

Suggested supervision essay titles

- Is there any good evidence for the existence of mirror neurons in humans?
- What is imitation for?
- How far is the research on theory of mind limited by laboratory measures of mentalizing?

Constructing Social Reality: Self-Recognition

Dr Jane Garrison

21st, 25th November

Outline

These two lectures will explore the brain areas and cognitive mechanisms which underlie our ability to recognise ourselves. I will adopt both a cognitive neuroscientific perspective (studying the neural basis of cognition), and a cognitive neuropsychological perspective (investigating the cognitive effects of brain injury or neurological illness). In the first lecture I will explore self-recognition and self-referential processing generally, highlighting the role of medial brain areas and the involvement of the default mode network. In the second lecture I will explore

specific examples of self-recognition including reality monitoring, agency and body ownership.

Suggested supervision essay titles

- What is understood about the mechanisms by which we distinguish between real and imagined information? Which areas of the brain are implicated in these processes?
- What techniques have been used to investigate the neurological basis of self-recognition and what are their limitations in terms of improving our understanding of this subject?

Constructing Social Reality: Discussion of the Topic

Dr Kate Plaisted-Grant, Professor John Mollon and Dr Jane Garrison,
28th November

Topic 3 – Mind and Body

The question of the relationship between mind and body, or psychological states and bodily states is pervasive throughout psychology. You have already encountered this question in the context of emotions and reasoning. No psychologist today would dispute the fact that mental states, cognitive processes, thoughts and intuitions reside in the brain. But it is not easy to understand how a pattern of neural firing *is* the same thing as the content of a thought, such as “I believe it is 2022”. A good illustration of the conundrum (how can mental entities be physical and vice versa?) is the placebo effect, where the belief that “taking X will make me better” results in faster recovery from illness, despite X containing no nutritional or medicinal properties. In the lectures on Mind and Body, you will encounter questions that require reference to both psychological and physical states for explanation. The three lectures on Emotion will demonstrate the complexity of the relationship between mental and physical states and the need to appeal to cross-cultural, experimental and social psychological approaches to elucidate the nature of emotions. The study of abnormal psychology demonstrates that a clear relationship holds between mental experience and neural substrate: increasingly sophisticated techniques in neural measurement have begun to reveal significant differences in neurotransmitter systems, connectivity networks and neural region activation in disorders of mental health. But how far can neurocognitive theories and findings account for the nature of mental experiences of a psychiatric disorder? This is a question you could discuss in supervisions in the context of the four lectures on Mental Health.

Mind and Body - Emotion

Professor Simone Schnall
20th, 23rd and 27th January

Outline

What is an emotion? Psychological researchers have pondered this question ever since William James asked it in the title of his article published in 1884. The current

lectures will review contemporary research addressing a number of issues within the broad themes of affect, emotion and mood. In particular, we will examine multiple perspectives on emotions, including the universality of emotion, prototype approaches, and appraisal theories of emotions. We will also explore the relationship between cognition and emotion, and the extent to which cognitions are a prerequisite for emotional experiences, and on the flip side, the extent to which emotions influence cognitive processes. Overall, the lectures will illustrate that although emotional experiences sometimes seem to disturb everyday functioning, recent research has demonstrated that many emotions have adaptive consequences.

Suggested supervision essay titles:

- Is it true that “Preferences need no inferences”?
- Are emotions universal?
- Does affect help or hinder with regard to cognitive processing?

Mind and Body – Mental Health

Dr Kate Plaisted-Grant

30th January, 3rd, 6th and 10th February

These lectures on mental health will introduce you to some of the major psychiatric diagnostic categories, the mental experiences of those given these diagnoses and the genetic, neural and psychological theories that try to explain the emergence of each disorder. We will also examine the most common major pharmacological and psychological therapies and evaluate their efficacy. We will also consider the origins of the categorical or “medical” model of mental disorders and its limitations and review recent proposals that abnormal psychological states should be regarded as varying traits, on a continuum across the population. This proposal has some interesting implications for research in this area.

Suggested supervision essay titles

- How should research of abnormal psychology approach the issue of symptom heterogeneity seen in psychological disorders?
- What are the strengths and weaknesses of the medical model of psychopathology?

Mind and Body – Discussion of the Topic

Professor Simone Schnall and Dr Kate Plaisted-Grant

13th February

Topic 4 - Decision-Making

Human cognition does not exist in a vacuum, but serves to help us make decisions in complex information environments. The study of how we make decisions offers an important window into human cognition, and enables us to ask fundamental questions like whether people have free will when making decisions, or whether human decision-making is rational. There is a wide spectrum of approaches to

studying human decision making, from more controlled laboratory settings, to more complex social environments. This series of lectures will start by looking at the neuroscience of decision making using more controlled experiments, and then move to a much more applied setting, and explore how people make political decisions. The series will end by exploring whether policy makers and politicians can make use of insights into human decision making from psychology to “Nudge” us into making better decisions.

Decision making - Neuroscience of Decision Making

Dr Deborah Talmi

17th and 20th February

Outline

Understanding how we make decisions is a central goal of cognitive psychology and neuroscience, whether as simple as deciding to scratch an itch or as complex as choosing a second-hand car. In these lectures we will explore the neuroscience of simple decisions. We will examine the cognitive and neural mechanisms that underlie decision-making, and how they explain complex decisions. We precede this discussion by an exploration of the age-old question of free will and ask whether neuroscience can help us resolve gap between determinism and personal agency.

Suggested supervision essay titles

- What can neuroscience experiments tell us about free will?
- Does the brain represent the parameters of expected utility theory?

Decision Making – Political decision making

Dr Lee de-Wit

24th, 27th February, 3rd March, 6th March, 10th March

Outline

One of the most important decisions we make in life is political – who should we vote for? For decades psychology has been helping us to understand how we make political decisions, and has revealed (perhaps surprising) individual differences associated with the decision to identify with one political party or another. This research has highlighted potential emotional, moral and cognitive differences associated with different patterns of voting. Experimental research has also revealed a range of potential biases that complicate, or perhaps even undermine the democratic process, from the influence of the perceived competence of the face of different candidates, to the order of candidates on the ballot paper.

Political psychology is therefore not only of applied importance, but also offers a complex social context in which we can see lessons from psychology come to life. This application of psychology raises some profound questions about the way in which our decision making might be shaped by evolution, subject to cognitive biases, and shaped by the political and social contexts in which people make decisions. The lectures will also explore how a meaningful understanding of the political landscape (particularly the limitations of a single Left-Right axis) are critical to understanding the psychology of politics.

In recent years, there has also been an increasing recognition that policy makers can make the most of (perhaps exploit...) the biases and heuristics (and morals and emotions) in human reasoning to 'nudge' people into making 'desirable' decisions. This recognition has manifested in the UK in the development of the Behaviour Insight Team, and the fact that one will now find a 'behavioural scientist' in almost every department in Whitehall. This series will end by considering whether policy makers can use psychological theories and research methods to nudge our decisions 'for good'.

Suggested supervision essay titles

- What is the role of threat in motivating different political decisions?
- What are the implications of moral differences across the political spectrum?
- What can cognitive research tell us about the origins of political polarization?
- What can policy makers learn from psychological research to encourage more people to turn out and vote?

Decision-Making – Discussion of the Topic

Dr Deborah Talmi and Dr Lee de-Wit

13th March